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To: CN=Joseph Somers/OU=AA/O=USEPA/C=US@EPA[]
Cc: CN=Kathryn Sargeant/OU=AA/O=USEPA/C=US@EPA;CN=Marion Hoyer/OU=AA/O=USEPA/C=US@EPA;CN=Rich Cook/OU=AA/O=USEPA/C=US@EPA[]; N=Marion Hoyer/OU=AA/O=USEPA/C=US@EPA;CN=Rich Cook/OU=AA/O=USEPA/C=US@EPA[]; N=Rich Cook/OU=AA/O=USEPA/C=US@EPA[]
From: CN=Catherine Yanca/OU=AA/O=USEPA/C=US
Sent: Fri 2/27/2009 12:53:45 PM
Subject: Re: Options for keeping toxics in a reduced EPAAct program
[fuelscharacterization.xls](#)
[Catherine Yanca](#)
[Joseph Somers](#)
[Catherine Yanca](#)
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(embedded image)

Thanks, Joe, for all your hard work on this! I know it takes a lot of time to wade through all of this. Does anyone want to comment on the fuels list before I send anything to Aron, Tony, and Rafal?

I think we can all agree that fuels 6 and 14 are at the top of our list. It's too bad fuel 6 isn't available yet. For myself, I liked the idea of a 13 and 16 pair, since this would give us another comparison of E0 and E10 at 40% aromatics. Maybe that puts too much focus on ethanol effects, though. I will differ to you all, but just wanted to float that past you.

Joseph Somers/AA/USEPA/US
EPA-OAR,OTAQ,ASD
Received Date:
02/26/2009 04:42 PM
Transmission Date:
02/26/2009 04:42:54 PM
To Catherine Yanca/AA/USEPA/US@EPA
cc Kathryn Sargeant/AA/USEPA/US@EPA, Marion Hoyer/AA/USEPA/US@EPA, Rich Cook/AA/USEPA/US@EPA
Subject Re: Options for keeping toxics in a reduced EPAAct program

Cay,

Here is my thinking on the fuels to test for toxic/speciation parameters. Admittedly, these interests are more limited than the broader area of developing a model predicting the effects of EtOH/aromatics content, RVP, and T50/T90 on HC, CO, NOx, and PM which others (Paul Machiele) has.

Fuels 6 and 14	compare effect of E0 and E10 at 15% aromatics
Fuels 6 and 10	compare effects of 15% and 40% aromatics at 7 RVP
Fuels 4 and 12	compare effects of 15% and 40% aromatics at 10 RVP
Fuels 3 and 4	compare effects of RVP at 10% EtOH

I also think that EtOH content is the most important variable so fuels 6 and 14 are the main ones to use. They differ only in EtOH content and have what is representative for RVP (7 versus 10), aromatics (15%), and even T50/T90 (190 and 340).

The effect of aromatics is determined by comparing fuels 6 and 10 and/or fuels 4 and 12.

And, the effect of RVP is determined by comparing fuels 3 and 4.

We have all of the fuels on hand for these comparisons except fuels 6, 10, and 3.

Attached is a spreadsheet showing these fuels and comparisons. I think I have these comparisons correct. The meeting today was useful in exchanging ideas. Please forward this list onto others (Aron, Rafal, Tony) as needed.

The plan is to run these tests with random fuels in the coming week and meet again (when Paul Machiele is back) to make further decisions.

Also, some of the vehicles were changed (Honda Civic for the Ford Focus, Toyota Sienna for Honda Accord) in the 10 vehicle matrix.

Catherine Yanca/AA/USEPA/US

02/25/2009 11:54 AM

To Rich Cook/AA/USEPA/US@EPA

cc Joseph Somers/AA/USEPA/US@EPA, Kathryn Sargeant/AA/USEPA/US@EPA, Marion Hoyer/AA/USEPA/US@EPA

Subject Re: Options for keeping toxics in a reduced EPAAct program

Ex. 5 - Deliberative

Rich Cook/AA/USEPA/US
EPA-OAR,OTAQ,ASD
Received Date:
02/25/2009 11:24 AM
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To Catherine Yanca/AA/USEPA/US@EPA
cc Joseph Somers/AA/USEPA/US@EPA, Kathryn Sargeant/AA/USEPA/US@EPA, Marion
Hoyer/AA/USEPA/US@EPA
Subject Re: Options for keeping toxics in a reduced EPAct program

Of course this matrix was selected to best inform a statistical analysis, and whittling down the fuels may leave us with significant gaps in our ability to model fuel effects.

I like the idea of bracketing the aromatics levels.

I think it would be good to have a high aromatics fuel with low RVP. Maybe 13?

Priorities (in my view):

- 1) ethanol
- 2) aromatics
- 3) RVP

If we have to whittle down fuels, let's not worry about T50/T90 effects.

Rich Cook
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EPA-OAR,OTAQ,ASD
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Received Date:
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To Rich Cook/AA/USEPA/US@EPA, Joseph Somers/AA/USEPA/US@EPA
cc Kathryn Sargeant/AA/USEPA/US@EPA, Marion Hoyer/AA/USEPA/US
Subject Options for keeping toxics in a reduced EPAct program

Ex. 5 - Deliberative/Ex. 4 CBI